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**Defense Acquisition Reform:
Behind the Rhetoric of Reform
-Landmark Commissions Lessons Learned-**

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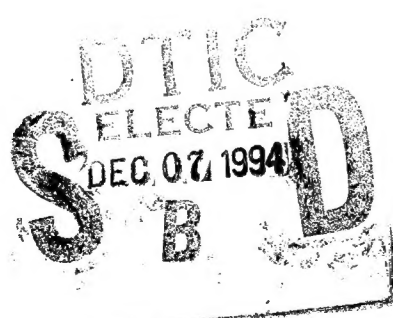
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INTRODUCTION

"There are few more fundamental obligations of the federal government of the United States than that of raising and maintaining the military forces to guarantee national security and safeguard the political and economic freedoms of the United States. The most expensive single element within this obligation is the acquisition of material and services..." (Center for Strategic and International Studies, 1987, p.3)

Since the American Revolution, our national security has relied on private industry to supply material, equipment and services needed, both in war and peacetime¹. However, defense acquisition has become big business for the United States (US) since World War II (WWII), driven by a shift in emphasis from simple, mass producible systems to weapons systems that incorporated the most advanced technological innovations available. The ramifications of this business go beyond national defense. The defense sector became a consequential part of the US economy; defense contracts represent jobs and economic stimuli for communities. Funding for defense research has helped spawn high-technology industries and processes (e.g., numerical control of machine tools) that contributed to the nation's economic power. And, because defense spending, for the past 45-50 years, has been the largest purchasing component of the federal budget, defense acquisition has provided politicians new ways to influence public funds distribution and advance socioeconomic objectives (e.g., small and minority business support, wage-level supports, environmental protection, disability program supports, protecting domestic industries). Defense acquisition has also given rise to a resilient bureaucracy and cemented the political tenets of "access and equity" and "checks and balances" in defense dollars allocation. Defense acquisition, and the process it employs, has become a consequential factor in American political and economic life! And, as a consequence, there has been a virtual continuous clamor of ideas for acquisition "reform" from all perspectives.

The aim of this research paper is to review and assess the impacts on the defense acquisition process by landmark, i.e., Presidential or Congressional

¹It is noted that through history the US has manufactured some war materials on its own, through its defense arsenals primarily.

chartered, commissions in its modern era (post-WWII), which have contributed to the evolution of the contemporary process, as well as provided many of the catalytic seeds for the cacophony of modern reform initiatives. Based on these lessons learned, a perspective as to the outlook for contemporary acquisition reform will be presented.

"Nobody likes the defense acquisition process." (McNaugher, 1989) Critics find it too bureaucratic, lengthy and expensive, with too few concrete results for the resources invested. Impediments to efficiency and/or cost sensibilities rain forth from countless "experts": micromanagement, overregulation, porkbarrelling, funding instability, performance enamorment, and a short-term perspective have all been cited with a high degree of durability. Defense reform crusaders' slogan of "waste, fraud and abuse" posits the human element as a sinister or untrained contributor to acquisition horrors. All critics have their own ideas as to what is broken with the process and how it needs to be fixed. The defense acquisition process is perhaps the most studied², analyzed and criticized operating system of the federal government!

But is this criticism justified? In a world where defense systems are complex and expensive, US weapons stand out as premier performers---evidenced by the impressive performance of US weapons systems in the Persian Gulf War. Allies continue to come here to study how and why the US defense acquisition process works so well. And, it does seem to do reasonably well what it is intended for--to equip the nation's forces with weapons technologically superior to those of the perceived threat(s).

Unfortunately, this does not appear to be enough! It would be foolish to expect absolute efficiency from an undertaking as complex and large as DoD's acquisition process: "...buying for the Defense Department is the biggest

²Examples of studies, beyond the landmark commissions, which have tended to focus more at the micro-level and/or some specific aspect of the defense acquisition process are: Harvard Business School study (1962), Packard Initiatives (1969-1970), Military Services and SECDEF study (1974), Acquisition Advisory Group (1975), Defense Resources Management study (1977), Defense Science Board (1978), Carlucci Initiatives (1981), Special Panel on Defense Procurement Procedures (1982), Center for Strategic and International Studies (1985 & 1987), the Defense Management Review (1989), the BENS Commission (1992), and the Section 800 Panel (1993).

business in the world...greater than the combined purchases of IBM, EXXON, and General Motors..." (Sammet,1990,p.xi). Yet, precisely because of its size and focus on complex, "state-of-the-art" capabilities, even isolated inefficiency can prove to be embarrassingly expensive (e.g., \$7.5 million overcharge for developing an antiaircraft gun (Fox,1988,p.334-335), and A-12 advanced tactical aircraft and C-17 transport plane programs cost growths). If virtual efficiency is unassailable as a goal, overruns or failures are too costly to ignore or downplay.

BACKGROUND

"The modern history of military...demonstrates...material support of the forces is of ever-increasing importance ...presents complex...defense management problems...advances in science and technology...source of this trend..."hardware" oriented and dependent...host of inseparable, associated management problems..." (Fitzhugh report,1970,p.62)

Today's defense acquisition process is not terribly old, having largely evolved in the post-WWII era. The emerging system has become more a reflection of the American political system, leaving marginal room for the business process it should be if it is to function "efficiently."

Americans first encountered the political difficulties with pursuing military acquisitions before WWII. As far back as the Revolutionary War, GEN Washington referred to war profiteers as "murderers of our cause." It was disclosed that officials had purchased goods for the government from themselves, and routinely practiced nepotism, favoritism and other various forms of corruption. Another example of political concern over defense acquisition practices was evidenced in the establishment of a select committee of Congress in 1861 to look into the allegations of waste and corruption involving defense contracts. The discovery of extensive waste and fraud brought demands for stronger laws to curb the abuses (Lockwood,1988,p.2).

If the defense acquisition process did work phenomenally well during WWII, it was not because the framing political system somehow came to terms with the military-industrial complex. Rather it was because wartime urgency encouraged the relaxation of traditional concerns with access and accountability. Arguably,

the US should have faced up to its acquisition process reform needs in the 1950s, when it took up "peacetime" weapons systems acquisition on an unprecedented scale. It did not, however, because the urgency of the beginning Cold War produced another relaxation of traditional political norms and strictures.

President Eisenhower asserted that the we were facing a hostile ideology; therefore the military establishment had to provide a "vital element in keeping the peace." "Our arms must be mighty, ready for instant action, so that no potential aggressor may be tempted to risk his own destruction," he said.³ In previous wars, this country had been able to convert from "plowshares to swords" in time to meet the national emergency. With the evolution of the Cold War and the intensification which new technological advances made upon the art of war, Eisenhower found this approach to be no longer viable. If the US had reverted to its historical approach for equipping the force, it would have left our security vulnerable to potential aggressors, because of the complexity, time and expense necessary to harness new technology into operational warfighting capabilities.

The defense acquisition process that emerged was destined to be controversial, once the atmosphere of crisis subsided, since it was organized around practices (e.g., monopolistic companies, buying in, contractor profit-making, concurrency and cost-plus contracting) that historically had been controversial in prior peacetime eras. In addition, many of these controversial features were embellished, not solely for the sake of reaping the benefits of advancing technology as much as to serve the goal of protecting programs/projects from competition. To make matters worse, immediately following WWII, there was no formal defense acquisition policy to debate, largely because there was no central authority to establish and enforce such. The process that emerged was one characterized by politically controversial arrangements that served politically useful goals. Thus, the impetus for defense acquisition reform, and also the basis for its failure, were built into the foundations of the maturing defense acquisition process!

³President's Eisenhower's Farewell Address of 1961.

HISTORY of MODERN LANDMARK ACQUISITION REFORM

The WWII experience and the subsequent onset of Cold War tensions determined three fundamental characteristics of the defense acquisition process (Burnett, 1989). First, the defense peacetime establishment would be comparatively large and permanent. The US role as a dominant power forced it to maintain the large standing army which our Founding Fathers had rejected.

Second, the war experience demonstrated clearly that future military weapons systems would rapidly evolve in capability and sophistication. As much as any other program, the effort to develop the atomic bomb and its delivery system (B-29) foreshadowed new generations of weapons systems that would be highly lethal and technologically complex. The perceived Cold War imperative to attain qualitative superiority ensured that state-of-the-art technological advances would be applied rapidly to weapons systems capabilities.

Third, an industry substantially dedicated to developing and producing defense weapons technology and systems would be the principal means for achieving large-scale peacetime weapons superiority. After decades of relying on a mix of public arsenals and ad hoc private efforts to produce weapons systems, the US turned decisively to private industry to design, develop, and produce its weapons capabilities needs.

The organization and management of defense became opportunities for change. The national security strategy was a paradigm shift. Historically, after wars the US had regressed to its isolationist foreign policy and founded its military strategy on the policy of mobilization. It now focused on world involvement, and containment of communism and Soviet expansionism. The national security strategy transformed to one of deterrence. Weapons systems technological superiority was fundamental to the military power component of this national strategy. The US was embarking on an arms race (with the Soviet Union), unlike anything it had ever sustained in peacetime!

National Security Act of 1947. The DoD is a product of the National Security Act (NSA) of 1947, which created a National Military Establishment that sought to balance civilian and military elements, and to coordinate three separate

executive departments (Army, Navy and Air Force). The head of this federated agency was titled the Secretary of Defense (SECDEF), who was defined as "the principal assistant to the President in all matters relating to the national security" (US Law, 1947, p.6). The SECDEF was charged with establishing policies and programs for the agency and exercising authority and control over such. It was chartered to execute "appropriate steps to eliminate unnecessary duplication or overlapping in the fields of procurement, supply...and research" (US Law, 1947, p.8).

To accomplish these coordinating powers, the SECDEF was to principally rely on four advisory bodies:

- (1) War Council,
- (2) Joint Chiefs of Staff (JCS),
- (3) Munitions Board, and
- (4) Research and Development (R&D) Board.

For the purposes herein, the latter two warrant further amplification as the first steps in acquisition reform.

The Munitions Board was established and mandated to be headed by a civilian. It was to be comprised of an under/assistant secretary from each of the three service departments. Its primary responsibilities encompassed:

- * coordinating activities with regard to industrial matters (including procurement and production plans of the departments),
- * planning for defense industrial mobilization,
- * recommending designations of procurement responsibilities across the services and promoting standardization of specifications and supplies, and
- * determining priorities of the military procurement programs.

The R&D Board was also to be chaired by a civilian, and was chartered:

"to advise the SECDEF as to the status of scientific research relative to the national security, and to assist him in assuring adequate provision for research and development on scientific problems relating to the national security" (US Law, 1947, p.13).

The NSA of 1947 legislated the structural underpinnings that we still operate with today in defense acquisition---centralized civilian control and

policy decision authority, especially over R&D and procurement expenditures. Efforts at reform since then have typically sought to strengthen these principles, especially with the increasing emphasis on systems technology superiority, the resultant expanding relationship of the military-industrial complex, the increasing intrusiveness of Congress into the defense acquisition process, and the growth of the defense budget.

Hoover I. Concern over a \$250 billion national debt, an unprecedented peacetime federal budget of \$40 billion, and the high cost of national defense (\$15 billion) were the major factors in persuading Congress to create the Commission on Organization of the Executive Branch of the Government (Hoover I, named after the chairperson of the Commission, former President Herbert Hoover) in 1947. The Commission's focus was confined to management and structure issues and recommendations, and left policy issues to the elected politicians.

The Commission's report on the National Military Establishment asserted that the nation was not getting its money's worth of defense because of waste and inefficiency in the armed services, "...reflects a lack of realistic understanding by the three military departments of the economic and social factors of national security." (US Commission, 1949c, p.11) It rejected a merger of the services, but recommended giving the SECDEF more authority and control, particularly over military expenditures. Regarding acquisition reform specifically, it is interesting to note what was considered about centralizing procurement:

"The efforts...to concentrate procurement in the hands of single service responsibility should...result in substantial economies. The overwhelming weight of evidence presented...was against the formation at this item of a single centralized procurement agency..." (Committee, 1949, p.50)

The Hoover I report recognized the need for a strong military establishment. The Commission expressed its concern about the impact of military spending on the economy and the need for making sure that defense "will not grow up as a thing apart." The premier defense organizational deficiency addressed in the Commission's report (US Commission, 1949c, p.8-18) was that the authority of the SECDEF was:

"...weak and heavily qualified by the...Act of 1947 which set up a rigid structure of federation rather than unification."

Specific highlights of the Commission's final recommendations were:

- * "...full power over preparation of the budget and over expenditures be vested in the SECDEF....,"
- * "...all statutory authority now vested in Service Departments be granted directly to the SECDEF....,"
- * "...the SECDEF have full authority...to establish policies and programs....," and
- * "...full authority for the procurement and management of supplies and material be vested in the SECDEF...."

It did not include DoD in its recommendation for establishment of a consolidated government supply agency for the acquiring of common supplies and services. Subsequent passage of the Federal Property and Administrative Services Act (1949) led to the creation of the General Service Administration; but, as permitted by law, DoD was exempted from the requirements on the grounds of national security.

What Hoover I proposed was a consequential alteration in the philosophy and constitution of DoD, to one of greater centralized authority and civilian control. President Truman applauded the Commission's report to Congress, and initiated legislation to place the principal recommendations in effect: "...these measures are essential to continued...progress toward unification..."⁴ Congressional resistance was gradually overcome, over a period of almost ten more years, by the time all of these proposals were successfully enacted into law!

Rockefeller Committee. Like WWII, the Korean War highlighted some organizational shortcomings in the defense establishment. Shortly after the Eisenhower administration took office, a standing presidential advisory committee was created (1953) to review the basic organization and procedures of government---the President's Advisory Committee on Government Organization (aka Rockefeller Committee, named after its chairperson, Nelson Rockefeller). The Committee was focused initially on DoD, and in particular on the position of the SECDEF and its principal supporting framework.

⁴President Truman's "Special Message to the Congress on Reorganization of the national Military Establishment," March 5, 1949.

The Committee intended its organizational proposals to establish a framework which would make for more effective military planning and civilian control, providing more defense for the dollar. Eisenhower submitted the Committee's recommendations to Congress⁵ and framed them in his vision of the principles necessary for an ever-prepared defense establishment:

"...clear and unchallenged civilian responsibility...maximum effectiveness at minimum cost...the best possible military plans...in case of war..."

The Munitions Board, the R&D Board, the Defense Supply Management Agency, and the Office of Director of Installations were characterized by the Committee as being too slow and clumsy to serve efficiently, and transferred their functions to the SECDEF. However, to assist the SECDEF in these functions, the Committee also called for six additional assistant secretaries. These assistant secretaries were intended to serve exclusively in a staff capacity to assist the SECDEF; as such they were not to be in the direct line of authority over the service departments. The Committee envisioned the three Service Secretaries as operating managers and the SECDEF's principal advisors. However, the assistant secretaries linkage to the chain of command placed them in a strategic position with the SECDEF, often contrary to the operating managers (to this day...).

Hoover II. Only days after Eisenhower's DoD reorganization plan (re: Rockefeller Committee) became law, Congress, again incensed with the growing federal budget and size of government (budget of \$75 billion, a growing \$266 billion national debt, and a \$35 billion defense budget) and the growth of social legislation, created a new Commission on Organization of the Executive Branch (Hoover II, again named after its chairperson, former President Hoover). However, proponents of the desire to reduce/eliminate government were determined that Hoover II would not suffer from any restrictions that had hampered Hoover I:

"The thought behind the legislation...has been not only to carry on the work of the Hoover Commission...but to go into certain fields that the Hoover Commission ...could not...did not have the power to recommend a complete elimination or

⁵The Committee's recommendations were embodied in Eisenhower's Reorganization Plan No. 6, under the Reorganization Act of 1949 as amended by the 83rd Congress (PL 88-3) in 1953.

abolishment of an activity...⁶"

Declarations such as above left little doubt that it was intended to go much further than typically defined by "reorganization" and to evaluate issues of policy and function, not only to save money but as a means to eliminate competition with private enterprise.

A major portion of Hoover II dealt with the business operations in DoD:

"...the most obvious opportunity to make real savings in the cost of Government is in the DoD because it has three-fourths of the government's payroll and more than 60% of its total budget..." (US Commission, 1955b, p.3)

Its intent was not only to identify areas for efficiency gains, but to strengthen the management oversight processes, especially in the areas of requirements planning, logistics, R&D, personnel and finance.

A soundbite of the Commission's report was that "\$2 billion of annual savings" (US Commission, 1955b, p.xvi) could be realized, attributable primarily to outmoded systems of administration. Hoover II addressed its DoD recommendations under four categories (US Commission, 1955b, p.xviii):

(1) "...realignment of civilian duties and lines of authority...": creation of a new civilian position responsible for planning and review of military requirements, and the replacement of four current assistant secretary positions by management assistant secretaries with responsibility for logistics, R&D, personnel, and financial management. These positions in the SECDEF's office were to be mirrored in each of the service departments, and all would be primarily responsible for budgetary review and policy formulations.

(2) "...unification of the supply of common use commodities and services...": through the consolidation (DoD-wide) and formation into a new Defense Supply and Service Administration, reporting directly to the SECDEF.

(3) "...improvement of personnel...": through pay improvements to attract quality and experienced managers and technical personnel, and a liberalization of the conflict of interest laws to minimize obstacles for talented executives to enter the public sector.

⁶Senate Report 216, 83rd Congress, 1st Session.

(4) "...improving and fixing responsibilities in the financial management..."

The focus of the acquisition reform specifics remained on common supplies and services. The more difficult problem of how to plan, evaluate and transform military needs into viable business plans for weapons systems was not addressed-- "weapons system" management did not appear to be a concern in the vernacular of the period.

Subsequent legislation enacted virtually all of the Commission's recommendations covering DoD business applications. The exception was the conflict of interest recommendation, in which just the reverse occurred and the laws were constricted even more so.

Fitzhugh Commission. Strong congressional and public criticism of defense acquisition management prompted President Nixon to appoint, in July 1969, a Blue Ribbon Defense Panel to study the acquisition process, this one dubbed the Fitzhugh Panel (after its chairperson, Gilbert Fitzhugh). While given a broad charter to examine defense management, this Panel was explicitly asked to comment on "...defense procurement policies and practices, particularly as they relate to costs, time and quality..." (Fitzhugh report, 1970, p.v)

The Fitzhugh Panel's focus was different than previous major studies (e.g., Hoover I and II, Rockefeller) in that its microscope was on weapons systems rather than common supplies and services. As such, and based on the deficiencies identified and the solutions recommended, this Panel's efforts represent a notable contribution to the subsequent acquisition reform rhetoric, and a cultural shift in acquisition focus for political interests, business deficiencies and reform aficionados.

In essence, this Panel's genesis could have been termed the undoing of SECDEF's McNamara's initiatives. Based upon previous reform recommendations (especially the work of Hoover II), McNamara aggressively tried to implement the call for more centralized control over and business-like approach to defense acquisition. In so doing, he demonstrated just how difficult it was to try and centralize authority in a political system designed to prevent just such from

occurring. In striving to eliminate duplication, he focused on specific programs, thereby inviting in political pressures deeper than ever experienced previously. In the end, McNamara's efforts elevated weapons systems acquisition to center stage of a political fishbowl!

The Panel found: excessive centralization with DoD, too many layers of management, and too wide of a span of control for the SECDEF. It asserted that the operating policies covering the acquisition of weapons systems were woeful:

"...contributed to serious cost overruns, schedule slippages and performance deficiencies...the difficulties do not appear amenable to a few simple cure-alls, but require many interrelated changes in organization and procedure..."
(Fitzhugh report, 1970, p.2)

At the macro level, the Panel recommended that there be three deputy secretaries: operations, management of resources (to include acquisition), and evaluation (to include test); but neither DoD nor Congress fully agreed and nothing was ever enacted.

Within weapons systems acquisition it strongly criticized the existing practice, called Total Package Procurement⁷, for accumulating risk in a program:

"...dangerously high magnitude of risks, from both cost and technical standpoints..." (Fitzhugh report, 1970, p.72)

It argued against the development of all elements of a system as a single project, advocating development of selected subsystems/components independent of the host weapon system. The Panel also found fault with:

"...unwarranted reliance on paper analysis...assumed that the technical risk is low...not surprising that cost estimates have proved to be unreliable..." (Fitzhugh report, 1970, p.73)

and emphasized a greater use of competitive prototyping.

It found that there was a reliance on fixed-price type contracts in the development process, as a natural extension of the existing single system/single project approach, predicated on false assumptions that risks had been mitigated

⁷Total Package Procurement was a policy that combined development and follow-on production efforts into a single contractual "package" with only the initial increment of effort definitized at the outset and each subsequent increment of work definitized as it was commenced. The objectives were to allow the government "...to make a choice between competing products on the basis, not of estimates, but of binding commitments concerning performance and price of operational equipment..."

in the previous contractual phase, and a mindset of equating fixed-price type contracts with competition.

The Panel also took issue with source selection practices that utilized so many elements as to having the effect of normalizing proposals' perceived differences. To eliminate this perception, as well as reduce the source selection time, it recommended limiting selection criteria to the most fundamental considerations in order to ensure a broader perspective of the relative merits of contractors' proposals.

The interrelation of the deficient practices and policies manifested itself, according to the Panel, in the increased aversion to decentralization of decision authority:

"...with such large risks involved in major systems development, senior Defense officials are reluctant to delegate authority...essential to successful program management..." (Fitzhugh report, 1970, p.73)

The Panel recommended a major systemic revision of policy to: introduce flexibility in selecting the acquisition strategy to be used, increase emphasis on prototyping to reduce risks and improve costs estimate reliability, foster incremental development of subsystems independent of host systems, and the introduce multiple decision points into the process. And, it recommended prohibition of the total package procurement!

Other areas recommended by the Panel were: increased testing, greater emphasis on professional development of acquisition personnel, avoidance of "gold-plating", increased authority for program managers, and clearer and more equitably applied conflict-of-interest rules.

This Panel's recommendations (exclusive of the three deputy secretaries concept previously described) were generally embraced by DoD and virtually mirrored the so-called Packard Initiatives (in fact, at least one author suggests that the Panel's existence was to give credibility to the Packard Initiatives (Fitzgerald, 1970)). Congress, too, generally supported the Panel's recommendations, especially the conflict-of-interest constrictions.

Commission on Government Procurement. The Commission on Government Procurement was created by Congress, November 1969, to conduct a comprehensive review of the

federal government procurement processes and procedures. This resulted from a growing concern within Congress (prompted by industry concerns⁸) as to the effectiveness of government procurements and the complexity and adequacy of the overall federal procurement processes.

The Commission's initial finding was:

"...void in policy leadership and responsibility...a fragmented and outmoded statutory base...in the absence of an effective focal point for procurement policy in the executive branch, DoD dominates its development..." (US Commission, 1972,p.9)

To eliminate this void, the Commission's major recommendation was the creation of a central Office of Federal Procurement policy with the following attributes:

"...independent...above the procurement agencies...directive rather than advisory authority...responsive to Congress..." (US Commission,1972,p.12)

Additional highlights recommended by this Commission were:

- * an integrated statutory replacement (as opposed to existing independent agency statutory treatment) of the DoD procurement acts and the civilian agencies governing laws,

- * authorizing the use of competitive negotiated methods, in lieu of formal advertising procedures,

- * encouraging greater use of multiyear contracts,

- * government-wide professional development programs to ensure the availability of competently trained procurement personnel,

- * initiating measures to eliminate delays in making funds available to acquiring agencies (e.g., greater use of multiyear authorizations and appropriations, changing the fiscal year timeframe, and fund availability based on program objectives/status as opposed to annual segments of work),

- * metrics to reflect progress and status of the process so that changes and improvements can be addressed as necessary, and

- * raising the small purchases and socioeconomic thresholds from \$2500 to \$10,000 (estimated to save the government \$100 million annually),

⁸Evidenced in the Military Operations Subcommittee of the House Committee on Government Operations, June 1969.

In regard to defense acquisitions, the Commission's report stated:

"The need to improve major system acquisition...apparent from the succession of cost overruns, claims, contested awards, buy-ins, bailouts, and defective systems...focus has been on the system product and not on its purpose...prematurely lock-in to a single system approach without...adequate attention to...what it is worth before less costly system alternatives are eliminated..." (US Commission, 1972)

Commission recommendations specifically addressing defense's major portion (68.5%, approximately \$39 billion, of the estimated total government procurement authority) of the federal process were:

- * emphasize competition and alternative system candidates at the beginning of the acquisition process,
- * eliminate restraints to the acceptance of innovative ideas through unsolicited proposals,
- * establish an independent operational test and evaluation activity,
- * withhold fund availability until systems have been adequately tested and evaluated,
- * centralize defense policymaking and oversight responsibilities for major systems acquisitions, and
- * delegate authority for programmatic decisions, except for: goals of a major weapons system program, and approvals for final design, limited production go-ahead, and full production.

This Commission's results had lasting effect on the acquisition process: Office of Federal Procurement Policy created (1974), Contract Disputes Act enacted (1978), Federal Acquisition Regulation system established (1980), Competition in Contracting Act enacted (1984), and, legislative formation of the Federal Acquisition Institute (1993).

DoD believed that these recommendations generally paralleled what it had initiated internally (i.e., through the so-called Packard Initiatives) and had been substantiated by the Fitzhugh Panel.

The most telling characteristic of this Commission's review and report was the clear shift in attention away from the traditional focus of supplies to weapons systems (similar to what was seen in the Fitzhugh Panel focus)!

Grace Commission. In his 1980 campaign, candidate Reagan maintained that he would cut the federal budget by 2% simply by eliminating "waste, extravagance, abuse and outright fraud." He said, he would:

"...conduct a detailed review of every department, bureau and agency that lived by federal appropriations..."⁹

The detailed review that Reagan called for was undertaken by a commission he appointed (June 1982), called the President's Private Sector Survey on Cost Control (PPSSCC, or Grace Commission, named after its chairperson, J. Peter Grace). The Commission reported out (government-wide) 2,478 recommendations claiming \$424 billion savings over three years, while emphasizing a shift to "sound business practices" and not a slashing of programs!

In regard to DoD, the Grace Commission started with assertions that:

"...the military services have never really bought into the need for central management by the SECDEF...Congress continually constricts DoD's management prerogatives...weapons choices...and other major management decisions cannot be made in isolation from home district political pressures..." (Grace report, 1983e, p.ii)

In the area of defense acquisition, the Grace Commission identified a compelling need to modernize and streamline the process. It maintained that the root of DoD's problems was in its organizational structure. Its recommendation was for total consolidation of acquisition functions at the OSD level. The services' roles would be limited to requirements needs, test and evaluation, and final approval authority for systems solutions. The pathway to this objective was proposed as:

- (1) a standard acquisition system within the existing decentralized structure,
- (2) a single manager of similar systems/technology approach within a service, and
- (3) consolidation of procurement and contract administration functions into a single agency reporting to OSD.

Additional specific recommendations, not quite so institutionally profound, included:

⁹President Reagan news conference, February 18, 1982.

* a newly created OSD-level position of undersecretary for acquisition, to rule and oversee the acquisition process,

* improvements in information exchange between and among defense laboratories and the warfighting planners,

* increased use of standardized parts in weapons systems and decreased use of military specifications (milspecs),

* limits on the number of new programs started each year (to ensure adequacy of full funding through production),

* "...using contracts...which require contractors to absorb a greater share of cost overruns..." (Grace report, 1983e, p.196),

* repeal/amendment of selected socioeconomic laws that had become "...outdated by social and economic trends..."¹⁰, and

* increased use of multiyear contracts, dual sourcing and awarding based on commercial criteria (product quality plus cost, not solely cost).

Although President Reagan cited this work regularly as validating his contention that fraud and waste existed in the government, it failed to have the impact that he sought. Critics charged that its claims of potential savings were overstated, and that most of the recommendations should be characterized as national policy changes requiring congressional action, not administrative and/or management actions as improvements in efficiency or eliminations of waste (US Congress, 1984). Congress took little action to ratify any Commission recommendations; hence the gross estimates of savings to be realized were never approached. However, one can see some of the seeds for subsequent reform initiatives, as well as the continued emphasis on weapons systems acquisitions and their process.

Packard Commission. Several highly publicized pricing scandals and the seeming endless news of contract cost overruns in the 1980s seemed to evidence that the

¹⁰Specifically, the Grace Commission's Dept. of the Air Force Task Force's Report on the Department of the Air Force, September 15, 1983, earmarked the repeal of the Davis-Bacon Act (p.136) and the Service Contracts Act (p.129), and the amendment of the Wash-Healey Act (p.150) and the Small Business Act Section 8A, provision for small and disadvantaged businesses (p.160) (Grace report, 1983b).

defense acquisition process had broken down and was in serious need of repair/overhaul. Understandably, the Reagan administration, which came to office committed to curbing government excesses, was embarrassed. In July 1985, President Reagan appointed the Blue Ribbon Commission of Defense Management (Packard Commission, named after its chairperson, David Packard, a former deputy SECDEF), to "...study issues surrounding defense management and organization..." Spurred by the publicity of the pricing scandals, contractor excesses¹¹ and an erosion of popular opinion support for his defense program, Reagan chartered the Commission to look into four broad areas of responsibilities, policies and procedures:

- (1) the defense acquisition process,
- (2) the organization and decision-making at DoD,
- (3) how the Congress exercised oversight of DoD, and
- (4) the National Command structure.

The Commission report began "...chances for meaningful reform will not come from more regulation but only with major institutional change..." (Packard report, 1986, p.41) It asserted that the process had fundamental problems that had to be corrected. To that end, it conducted a "search for excellence" in order to find a model of excellence for defense acquisition. As a result, it identified critical features that typified successful programs: clear command channels, stability, limited reporting requirements, small quality staffs, dialogue with users, and prototyping and testing (Packard report, 1986, p.50).

The Commission concluded "...that defense acquisition typically differs from this model in almost every respect..."! (Packard report, 1986, p.51)

It provided some major recommendations that were intended to fundamentally alter the institutional acquisition process and emulate the model of successful commercial programs:

- * creation of an OSD undersecretary of defense for acquisition (USD(A)), to oversee all defense acquisition,

¹¹As of May 1985, 131 separate investigations were pending against 45 of the DoD's largest 100 contractors. These involved such issues as defective pricing, falsified or unallowable claims, and kickbacks.

* establishment of service acquisition executives (SAEs), reportable to both the USD(A) and their service secretary,

* creation of program executive officers (PEOs), responsible for a small group of program managers (PMs) and reportable directly to the SAE, and

* establish a board "...responsible for...the "affordability" decision, and the "make-or-buy" decision..." (Packard report, 1986, p.58).

Additional recommendations by the Commission were: increased use of prototypes, more testing earlier in a program's life cycle, limiting production concurrency, reducing the number of acquisition personnel while emphasizing the quality of such, an alternate personnel system for acquisition personnel, budget stability initiatives, and improvements in government and industry accountability.

The overall record in implementing the Packard Commission recommendations is not encouraging. Measures taken to date have set the new structures and processes in place, but little progress has been made in eliminating the structures and power relationships they were intended to supplant. Regarding business practices shifts (e.g., use of commercial products, limiting milspecs), progress has been slow and culturally inhibited. Little evidence suggests that the implementation of the Packard Commission recommendations have had any dramatic substantive effect on the defense acquisition process yet.

LESSONS LEARNED

Generally speaking, the expansion of oversight and administrative and/or legislative intrusions in the modern (post-WWII) defense acquisition process were responses to spiralling weapons systems costs and "arsenalizing" of the defense industry (Peck, 1962, p.583). The evolution of a centralized bureaucratic apparatus was championed as the best way to maintain authority and accountability during this period of upheaval in economic, social and international affairs. Viewed at this level, the history of modern landmark acquisition reform fits a general pattern of institutional development and rationalization in public administration. The history of defense acquisition reform can be described as

an ongoing effort to determine and apply the optimal legal and regulatory governance structure for developing and procuring weapons systems¹².

However, the management and execution of the defense acquisition process and its resultant reform landmark commissions' results cannot be evaluated using only conventional management criteria, for the process did not evolve and/or exist under conventional circumstances. On the contrary, it operated in highly volatile environments, subjected to many pressures and conditions which were largely beyond the control and often beyond the influence of those primarily responsible for the process.

Among the more relevant factors bearing on it were the shifts in national policies and priorities, both in foreign and domestic lenses, and the accompanying shifts in the range of US commitments and the numbers and types of crises which occurred.

Among the most significant of the factors impinging on defense acquisition reform, was the changing attitudes and opinions of the American public. Not surprisingly, considering the amount of money involved, "scandals" seemed to abound and Congressional interest increased. Most of the "scandals" have been recounted in books, serialized in newspapers, and memorialized in congressional hearings. More importantly though, such "scandals" were nothing new. Nor was it new that Congress mired itself in the acquisition process; the framework may be no more rigid now than ever before, but the level of minutia and intrusiveness has increased, e.g., the cascade of reporting requirements.

Changes in public attitude were aptly illustrated in how the public viewed the defense industry. In times of generally acknowledged high national peril, such industry was lauded and characterized by such lofty phrases as the "Arsenal of Democracy." In other times, the public regarded the same industry as a scapegoat for a wide range of problems and abuses, and characterized it as a conspirator in a sinister "military-industrial complex," whose objectives were

¹²The Packard Commission observed that "...over the years, Congress and DoD have tried to dictate management improvements in the form of ever more detailed and extensive laws or regulations. As a result the legal regime for defense acquisition is today impossibly cumbersome."

oftentimes perceived to subvert the best interests of the nation for private gain as well as whose fiduciary mantra of public funds was fraught with "fraud, waste and abuse" practices.

Each attitude impinged on the views of and approaches to the acquisition reform undertakings. In the context of an "Arsenal of Democracy," the primary focus was quantity, quality and speed of production. In the context of a "military-industrial complex," the focus was more likely be on the business practices, ethics, and methods of government oversight. In actuality, all of these objectives were [are] important and needed attention at all times.

Some of the constant principles embodied in all of these landmark commissions were:

- * increased centralized policy authority and oversight,
- * decentralized and flexible execution management responsibilities,
- * need for stability in defense funding, planning and acquisition,
- * reduction of acquisition infrastructure with improvements in quality of workforce,
- * diminution of political externalities,
- * foster competition,
- * "commercialization" of acquisition practices, and
- * increased emphasis on prototyping and early-on testing.

Lastly, a consistent "implied finding" associated with the landmark commissions' efforts was the failure of DoD leadership to follow-through on recommendations to ensure implementation. Gilbert Fitzhugh, chairperson of the President's 1970 Blue Ribbon Defense Panel, noted that when the studies were completed and commissions/committees disbanded, those who remain to assess and implement the recommendations are those whose "...toes have been stepped on..."¹³ in the findings. There was, not unexpectedly, a noticeable lack of enthusiasm, understanding and conviction to support. Consequently, much effort was directed toward proving implementation and creating reform rhetoric (both executive and

¹³Gilbert W. Fitzhugh testimony before the Senate Committee on Armed Services, 1970.

legislative branches), and little persistence to following up to ensure lasting reform occurred.

The defense acquisition process has changed over the years since WWII, but the changes have predominantly been incremental and cosmetic, not fundamental and cultural. The "significance" of the changes can be discerned in the retrospect afforded by the time that has passed. The specific criticisms leveled against DoD for its inefficiencies, waste, fraud and abuse have a certain timelessness to them. For example, in the mid-1950s, Congressional hearings were held which revealed what was then considered overpricing for common items of equipment purchased within the defense acquisition process. A similar scandal was a lightening rod for defense acquisition reform zealots in the mid-1980s. Today, many of the easy reforms have been enacted, and there have been efforts to implement them. But many of the problems were [and still are] cultural, not procedural per se.

Arguably, this state of affairs was inevitable. Defense acquisition was [is] a public function that lacked simple governing mechanisms like a market economy. The sheer age of the process as well as the changing political and military climate wrought bureaucratic anachronism, while its unprecedented size invited greater political attention. The problem was not a specific reform; rather the problem was rooted in a political system designed to check the accumulation of power and effective in so doing. Centralizing reforms continued to become law. But, given the constitutional framework in which they occurred, they also produced more bureaucracy---which made it more, not less, difficult to effect "efficiency" improvements.

CONTEMPORARY REFORM OUTLOOK

"The institutional behavior that has to be changed has built up over more than four decades, and there will be enormous resistance to such changes."---Jacques Gansler

In the aftermath of the Cold War, the defense budget has pitched downward from a level barely adequate to support the forces deemed necessary to deter the perceived threat towards an as-yet-undetermined lower level to support as-yet-

undetermined forces against an unknown threat. Exacerbating this grim outlook is an anachronistic acquisition process, which has shown itself to be resilient to fundamental change. The defense establishment no longer has the support to spend the same level of money, let alone more, yet achieve less in providing quality capabilities which the forces need and deserve. The imperative must be to "buy smarter," i.e., more with less.

For this to happen, DoD must recognize, first, its leadership responsibility in initiating this change---leadership cannot come from the 535 people on Capitol Hill, but must come from the implementors themselves in the defense acquisition process. Second, the acquisition culture must be dramatically altered for the way defense does its business.

The Challenges. The defense acquisition process is in trouble. Whether the term "crisis" is appropriate is best left to the opinion of the reader. But without some effective action, the consequences for national security could be seriously damaging.

First, the defense budget will continue to decline to a point where it will constitute less than 4% of GDP. This will be the lowest fraction of GDP for defense since WWII. The fiscal Damoclean sword is descending!

Second, we have produced a number of excellent weapons systems, but also some highly visible failures or "inefficiencies." The latter include examples such as the A-12 advanced tactical aircraft and the difficulties confronting the C-17 long-range heavy airlift transport plane. However, even successful weapons systems have been expensive, experienced setbacks during development, and generally taken longer to produce than originally projected.

Third, the cost of weapons systems continues to grow. In the past we could afford to purchase major weapons systems in "economical" quantities, but the negative momentum of defense spending makes that all but impossible today. Increasing technological complexity, low production rates, high per-unit costs, and the inefficiency of the acquisition process are combining to drastically curtail defense modernization opportunities.

Fourth, the direct and indirect costs of oversight are large and growing.

Government regulation and inspection, however justified and necessary, impose further demands on an already constrained defense budget. Perhaps more pernicious is the effect this oversight has in chilling the program manager's and industry's innovation and creativity.

Fifth, the time required to incorporate technology advancements is growing. This problem appears to be pandemic to American industry, which has not kept pace with its global counterparts (e.g., Japanese and Germans). But, while the civil sector, driven by the forces of global competition, is making strides in shortening development cycles, integrating new technology more quickly, and reducing the cost of manufacturing, the trend in defense appears virtually opposite. New weapons take longer than ever to reach the field, and in many cases they use critical components that are behind those available in the commercial marketplace.

Finally, given the combination of a declining budget and a shrinking US defense industrial base, inaction on reform could precipitate further erosion of our capacity for exploiting advanced technology. With the unprecedented downturn in defense spending, the US defense industry is struggling to reorganize itself for growth, if not for survival. However, one must bear in mind that industries will respond to market forces in shaping its business strategies, not national security objectives necessarily.

The Enablers. It is imperative that the defense community become a "world class buyer." It is imperative that we acquire weapons capabilities faster and more efficiently, respond more quickly and effectively to rapidly changing technology, and reduce the tendency to avoid risk. We have been paying too much for individual weapons capabilities and technologies, which take far too long to be developed and produced.

The pyramid structure of the defense industry---very few firms at the top producing actual weapons systems for the most part, and a multitude of actual and potential manufacturers supporting at the bottom---requires a flexible approach itself in acquisition reform. Increasing reliance on "market forces" to foster quality and reduce costs makes sense as one gets closer to the bottom of the

pyramid; but, at the top, those forces do not usually exist and must be artificially created. The objectives may be the same towards both top and bottom suppliers, but the approaches to each must be different.

There are a number of steps that could improve the existing process (the enduring problems cannot be attributed to the lack of ideas for reform...). Advanced herein will be five categories to plough deeper the ground already dug and capitalize on good ideas of the earlier landmark commissions:

- (1) a more commercial-like acquisition business orientation,
- (2) stability in terms of resource discipline,
- (3) an entrepreneurial/risk-taking culture,
- (4) defense industrial base planning, and
- (5) an acquisition reform commission.

A More Commercial-like Defense Acquisition Process Business Orientation. The defense acquisition process does produce sophisticated weapons systems (evidence the Persian Gulf War). However, it has done so at the expense of enormous amounts of money, not always well spent, and the creation of virtually limitless mounds of paper documentation. In particular, the process itself seems to encourage inefficiency. Some of the problems are due to the constitutional framework inherent to the process, and some due to the unique and linear nature of weapons systems development and production. However, with the realities of the defense budget shrinking, it becomes all the more essential that we reduce waste and inefficiencies.

A number of measures should be pursued to make DoD a more business-oriented and effective buyer:

- * increased use a commercial goods, specifications and broad performance criteria, to include overt disincentives/barriers to use of milspecs, e.g., the Army has instituted a policy that use of any milspecs must be explicitly authorized by the cognizant PEO,

- * rewards and clear incentives for firms that have a certifiably good track record of doing defense business, e.g., reduction of oversight and inspection requirements, priority consideration in the awarding of new contracts

to firms whose past performance has exceeded expectations,

- * increased emphasis on commercial modules/subsystems utilization and open system architectures---based on industry standards, e.g., VME (Versa Module Eurocard) which is well established in industry and clearly defined by IEEE 1014, which will allow defense to leverage off ("spin on") of industry's technology advancements/maturation,

- * greater effort to balance performance with costs, rejecting costly performance requirements and add-ons that only marginally contribute to system effectiveness, i.e., the "satisficing" decision concept¹⁴,

- * greater use of modeling, simulation and prototyping of new capabilities, to include critical subsystems, and

- * movement to a price analysis oriented process, driven by market forces, as opposed to the existent cost structure analysis practice (which seeks to use administrative oversight (of some determined "baseline") to achieve productivity gains and/or cost control that competition ordinarily elicits in commercial markets).

Resource Discipline. The annual budget process takes up too much time and subjects critical/major warfighting capability programs to unnecessary instability. One-year budgets preclude a long-range view and emphasize short-term solutions and stop-gap measures. During an almost year long cycle, the budget goes through three separate and largely duplicative processes (budget, authorization and appropriation) in which programs are frequently and sometimes frivolously perturbed. Executive and legislative branches multiyear agreements on the defense top line would effectively remove it from yearly debate and speed up the budget process. (The multiyear agreements of recent years have worked well and provided an annual stability to the defense budget which would be highly beneficial, for more stable and realistic planning, if would encompass a longer

¹⁴The concept of "satisficing" describes the behavior of an individual who seeks a solution good enough to satisfy a minimum set of conditions, i.e., certain cognitive limits lead decisionmakers to think in terms of bounded rationality. It is simply making the best decision one can under the existing circumstances in lieu of striving to maximize optimization; thus the goal of the decisionmaker is to get a good enough answer, not the best possible one. (Simon, 1976, p.25)

perspective.) Authorization of major defense systems on a "milestone funding"¹⁵ basis would enhance stability, make planning easier, and promote more efficient oversight by encouraging a long-term perspective. Successful multiyear resourcing would reduce the frequency of Congressional and DoD tinkering, yet retain the flexibility for possible action if warranted. DoD already has the authority necessary to budget on a two-year basis¹⁶, and in fact does six year resource defense planning. What is left is for both DoD and Congress to make a commitment to support and preserve such stability for critical defense capabilities, based on successful milestone decisions.

An Entrepreneurial Culture. Organizational culture is more than just an academic buzzword. Deregulation and/or commercialization of practices will not, unto themselves, resolve all the challenges that figure prominently in the contemporary acquisition process. The acquisition workforce needs to be made leaner and smarter if its performance is to improve and overall acquisition costs to be reduced. Cultivating a culture of entrepreneurial performance is crucial to making fundamental change in how the acquisition process works. Such an entrepreneurial culture will foster a willingness among the acquisition workforce to solve problems and take risks instead of falling back on routines or procedures when it is slavish fealty to those that perpetuates the worst problems of the defense acquisition bureaucracy. But, how can an aggressive problem-solving attitude be encouraged when the framing political system often chops off heads that stick out too far? Problem solving means prudent risk taking; it means experimenting, moving past current and tested procedures. But risk taking, even if prudent, brings with it occasional failure. And the media and elected officials alike have discovered that horror stories sell. Steady superior

¹⁵"Milestone funding" is a resourcing concept whereby the estimated cost for a complete milestone phase is authorized at the onset of that acquisition cycle phase based upon the successful milestone decision, with a commitment to not alter the funding during that phase unless the PM and/or the program encounter consequential (i.e., beyond some predetermined and measurable metrics) cost, schedule or performance issues or require additional funding above the program's baseline for that phase of the acquisition cycle.

¹⁶DoD received the authority to budget on a two-year basis in the 1987 Defense Authorization Act.

performance will be ignored while the isolated gross dereliction draws attention.

Improving performance from the bottom up has to build from top-down leadership. What matters is the ability of leaders to inspire, to infuse value. Cultural change requires steady ongoing leadership from the top. It also demands subordinates who are willing to suspend the disbelief with which they are likely to greet the cheerleaders' initial exhortations. A corporate culture which emphasizes pride, commitment, collaboration and teamwork needs to be the bedrock foundation. It must encourage people to do whatever needs to be done, to take initiative, to experiment, to create, to develop, to test, and to innovate. The acquisition leadership (both executive and legislative) must establish a framework within which individuals willingly can test the limits and create new possibilities for success; a framework characterized by standards of conduct, integrity and concern---all of which must be above reproach in the "fish-bowl" of defense acquisition.

Defense Industrial Base Planning. One of the tenets of the existing national security strategy is "reconstitution": the ability to rebuild the nation's defense industrial base in time to meet emerging threats. The DoD, and other appropriate federal government agencies, must find a way to sustain a minimal industrial capacity in key areas, short of sustaining large, inefficient industry capacity predicated on highly ambiguous requirements (which it would be highly doubtful that Congress would ever support/authorize in such a declining and competitive resource environment). A coherent, overt defense industrial base strategy, founded principally on a greater civil-military integration, must be crafted in partnership with industry.

Acquisition Reform Commission. It seems like forever there have been continuous calls for "far-reaching" reforms! And, after almost 50 years of, "experts" are still recommending reforms to improve and increase the efficiency of the defense acquisition process. The jargon, e.g., "economy and efficiency," "streamlining the process," "eliminating nonvalue-added requirements," is still to reform in order to "save money." The hold of these ideas, even in this age of a "paradigm shift" in national security strategy, is testimony to the time-warp that affects

thinking about acquisition reform. This situation is reminiscent of the military base closing dilemma, until such time as the extraordinary creation of a "mixed" outside commission and a "fast track, up or down" legislative package. A similar creative approach may be the only way to attain systemic defense acquisition reform and restore integrity to the process.

It would benefit the overall process and all perspectives (i.e., executive branch (to include DoD), legislative branch, industry, and academia) to have a new commission, along the lines of the Hoover or BRAC variety, i.e., "mixed¹⁷," if for no other reasons than (1) to dramatically highlight the differences that exist between a public-regulated process and commercial practices, and (2) to create an oversight body to ensure continuity in purpose, objectives, and follow-through necessary to craft and implement meaningful systemic structural acquisition reform. However, the danger that any new commission must avoid will be to attempt to apply yesterday's answers to today's problems.

CONCLUSION

The challenge is not easy. There are no quick or easy solutions. Our past practices and cultures have ill-prepared us to recognize the magnitude of the challenges before us to systemic defense acquisition reform. The perception of a faded military threat has diminished public and congressional support for defense reform and spending. The defense industrial base is undergoing an unprecedented reorganization and downsizing, a trend which will continue as the defense sector proves less and less attractive, especially for companies involved in "dual-use" technologies. Not even the most prescient reformers can know what will work best.

The challenge is to manage and innovate changes effectively. Coping with a discordant and unpredictable world will challenge acquisition policymakers for years to come. Approaches and solutions will be adopted and discarded quickly to keep pace with events. In order to attain real and lasting progress, DoD must

¹⁷A mixed commission is one which has members appointed by both the executive and legislative branches.

begin the process of breaking down the traditional ways of doing business. Fundamental cultural changes are needed! There are compelling reasons to appreciate the need for patience in reformation; not the least being the sheer power of bureaucratic cultural inertia.

"You can always count on Americans to do the right thing after having first exhausted all other alternatives."---Winston Churchill

The landmark commissions on the defense acquisition process have demonstrated many unsuccessful attempts at trying to alter the process towards a more business-like, efficient and effective framework. Hope springs eternal that we have exhausted all of those alternatives now. Our forces deserve it; the taxpayers deserve it; our national security requires nothing less. The imperative is to "buy smarter."

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